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What is claimed is:

1. A method for treating rheumatoid arthritis or other forms of inflammatory arthritis which comprises administering to a subject an amount of an agent effective to inhibit the activation of the CxCR4 receptor by SDF-1.

5 2. The method of claim 1, wherein the agent is oligopeptide or a polypeptide.

10 3. The method of claim 1, wherein the agent is an antibody or a portion of an antibody.

15 4. The method of claim 3, wherein the antibody is a human, a chimeric, an antibody or a humanized antibody.

5 5. The method of claim 1, wherein the agent is a nonpeptidyl agent.

20 6. The method of claim 5, wherein the nonpeptidyl agent is a bicyclam.

7. A composition for treating rheumatoid arthritis comprising an effective amount of an agent capable of inhibiting the activation of the CXCR4 by SDF-1 and a pharmaceutically acceptable carrier.

8. The composition of claim 7, wherein the agent is oligopeptide or a polypeptide.

30 9. The composition of claim 7, wherein the agent is an antibody or a portion of an antibody.

10. The composition of claim 9, wherein the antibody is a human chimeric or humanized antibody.

35 11. The composition of claim 7, wherein the agent is a

nonpeptidyl agent.

12. The composition of claim 11, wherein the nonpeptidyl agent is a bicyclic.

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13. A method for determining whether an agent is capable of inhibiting the activation of a CXCR4 receptor by SDF-1 comprising:

10 (a) contacting a cell which expresses CXCR4 receptor in the presence of SDF-1 with an agent under condition permitting activation of the CXCR4 by SDF-1 if the agent is absent; and

15 (b) determining whether that amount of activation of the CXCR4 receptor by SDF-1 is decreased in the presence of the agent relative to the amount of activators in its absence, such a decrease in the amount of activation indicating that the agent is capable of inhibiting the activation of the CXCR4 receptor by SDF-1.

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14. The method of claim 13, wherein the cell is a lymphocyte or monocyte.

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15. The method of claim 14, wherein the cell is an animal cell.

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16. An agent identified by the method of claim 13.

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17. A composition comprising an amount of an agent identified by the method of claim 13 effective to inhibit the activation of the CXCR4 receptor by SDF-1 and a suitable carrier.